CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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25X1

COUNTRY	East Germany	REPORT	
SUBJECT	Kabelwerk Oberspree (KWO) Cable Production	DATE DISTR.	17 April 1953
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25X1

This is UNEVALUATED Information

THE SOURCE EVALUATIONS IN THIS REPORT ARE DEFINITIVE.
THE APPRAISAL OF CONTENT IS TENTATIVE.
(FOR KEY SEE REVERSE)

25X1

1. Ozone-resistant cable

   a. Development work has been brought to a successful conclusion and the principle is being used in X-Ray cable, which is being manufactured for domestic and export needs.

   b. The problem of ozone-resistance has been solved by the intercalation of vulcanized and unvulcanized rubber layers. The ozone-resistant rubber mixture used is sulphur-free and contains essentially, besides natural rubber, kaolin and paraffin.

   c. The cable is built up thus: a rubber coating is first sprayed onto the insulated LT core for the glow discharge cathode (Glimmkathode). The double-cored cable thus formed is then given a HT conductor in the form of a copper mesh (Kupfergeflecht). Further layers are then banded on. The innermost layer of rubber now coming onto the cable and touching the conductor, as well as the outermost layer of rubber, are of the unvulcanized, sulphur-free ozone-resistant sort. Between this inner and outer layer are alternated layers of vulcanized and unvulcanized rubber. Finally, a metal protector is added and on top of this a black yarn (Garn) layer.

   d. The basic new development in this cable lies in the fact that the cable has not been sheared, as has been done previously, but coated.

2. High frequency corrugated cable (Rillenkabel)

   a. High frequency telephone cable (Fernsprechrillenkabel). Three sorts of this cable have been developed by KWO, but only one was ever produced by them. This is cable type Rillenkabel 5.5/18. It is constructed as follows:

252

25 YEAR RE-REVIEW

STATE	x	ARMY Ev	x	NAVY	x	AIR	x	FBI		AEC		ORR Ev	x	OSI Ev	x

(Note: Washington Distribution Indicated By "X"; Field Distribution By "#".)

Bells of trolitul about 18 mm. in diameter are drawn over a conductor of solid copper or plated aluminum of 5.5 mm. diameter. The bells are coated with styroflex foil so that they will hold together. Two half shells of copper strip sheet about 0.4 mm. thick are placed over the styroflex coating. These shells are corrugated and shaped by machine. These copper shells form the second conductor of the cable. Over the copper shells is placed a binding of oppanol (Decelith). Finally, a fabric tape and a steel wire mesh as mechanical protection are added.

The use of the trolitul bells is not always feasible because of the material coating and inadequate stability. Therefore, another cable with ceramic subtances as dividers has been developed. This new cable has a smaller diameter, both with respect to the conductor and the shells: 2.4 x 9.6. The corrugation is distinguished from that of the first cable, however, in that here, through a special process, the ceramic substances, about 3 mm. thick, consist of Frequenta, so imbedded in the corrugating of the sheet shells that the space between them is about 2.5 mm. This process is known as "sicken" (seaming). A seamed sheet is called the second cable conductor. In manufacturing, the seamed parts of the sheets (the shells) are held together by clamps. Further construction with oppanol, etc., is the same as in the trolitul bell cable.

The second corrugated cable, developed for the same purpose with ceramic substances, has an aluminum duct in the copper sheet shell that is metalized with the cable press. Thus the ceramic parts are held apart through the aluminum duct in the certain desired distances.

The cable is for a wave-length of 20 cms. About 10 - 20 kms of trolitul corrugated cable was delivered to Sachsenwerk, Radeberg, in 1951.

b. Antenna cable This is in general similar to the above, but the dimensions are greater; the outer diameter of the cable of this sort produced in late 1952 was about 100 mm. Further work is being done on this cable. It is only known in this connection that it has been possible, through the use of a coolant, to reduce the diameter to 50 mm (outer diameter). Another cable is under development with an even smaller diameter. This will have no air spaces and will use oppanol as an insulator. It will not be suitable, however, for very high power usage.